

CLAIMS

We claim:

- 1 1. A keypad, comprising:
2 a plurality of keys; and
3 a flexible carrier contacting the plurality of keys, the flexible carrier having openings
4 therein between the plurality of keys.
- 1 2. The keypad of claim 1, wherein the openings between the plurality of keys do not
2 contact the plurality of keys.
- 1 3. The keypad of claim 1, wherein the plurality of keys are formed as a unitary part
2 of the flexible carrier.
- 1 4. The keypad of claim 1, further including attachment means for attaching the
2 plurality of keys to the flexible carrier.
- 1 5. The keypad of claim 1, wherein at least some of the openings are cruciform-
2 shaped.
- 1 6. The keypad of claim 1, wherein at least some of the openings are round.
- 1 7. The keypad of claim 1, wherein at least some of the openings are oval shaped.
- 1 8. The keypad of claim 1, wherein at least two of the openings have different shapes.
- 1 9. The keypad of claim 1, wherein the openings divide the flexible carrier into
2 multiple parts.
- 1 10. The keypad of claim 9, wherein the multiple parts are multiple columns.
- 1 11. The keypad of claim 9, wherein the multiple parts are multiple rows.
- 1 12. The keypad of claim 9, wherein the multiple parts have a zig-zag shaped edge.
- 1 13. The keypad of claim 1, wherein the openings divide the flexible carrier into at
2 least two serpentine-shaped parts.
- 1 14. The keypad of claim 1, wherein the openings form at least one slot in the flexible
2 carrier.
- 1 15. The keypad of claim 1, the flexible carrier having cutouts in an outer perimeter of
2 the flexible carrier.
- 1 16. The keypad of claim 15, wherein the cutouts in the outer perimeter occur in
2 accordance with locations of the plurality of keys.

17. The keypad of claim 1, wherein the openings in the flexible carrier occur in accordance with locations of the plurality of keys.
18. The keypad of claim 1, wherein the openings serve to decouple the plurality of keys from each other.
19. The keypad of claim 1, wherein at least one of the plurality of keys is tactilely differentiated from others of the keys.
20. The keypad of claim 1, wherein at least one of the plurality of keys are domed.
21. The keypad of claim 1, wherein at least one of the plurality of keys is bowl-shaped.
22. The keypad of claim 1, wherein at least one of the plurality of keys has an inverted dimple thereon.
23. The keypad of claim 1, wherein at least one of the plurality of keys has a peak thereon.
24. A keypad, comprising:
a plurality of keys, each key having an actuator; and
a flexible carrier surrounding the plurality of keys and having an opening for each actuator and having additional openings between the actuators, the additional openings serving to decouple the plurality of keys.
25. The keypad of claim 24, wherein at least one of the actuators contacts a snap dome when the actuator is in a pressed condition.
26. The keypad of claim 24, wherein the openings between the plurality of keys do not contact the plurality of keys.
27. The keypad of claim 24, wherein at least some of the additional openings are cruciform-shaped.
28. The keypad of claim 24 wherein at least some of the additional openings are round.
29. The keypad of claim 24 wherein at least some of the additional openings are oval shaped.
30. The keypad of claim 24 wherein at least two of the additional openings have different shapes.

- 1 31. The keypad of claim 24 wherein the additional openings divide the flexible carrier
- 2 into multiple parts.
- 1 32. The keypad of claim 31, wherein the multiple parts are multiple columns.
- 1 33. The keypad of claim 31, wherein the multiple parts are multiple rows.
- 1 34. The keypad of claim 31, wherein the multiple parts have a zig-zag shaped edge.
- 1 35. The keypad of claim 24, wherein the openings divide the flexible carrier into at
- 2 least two serpentine-shaped parts.
- 1 36. The keypad of claim 24, wherein the openings form at least one slot in the
- 2 flexible carrier.
- 1 37. The keypad of claim 24, an edge of the flexible carrier having cutouts in an outer
- 2 perimeter of the edge.
- 1 38. The keypad of claim 37, wherein the cutouts in the flexible perimeter occur in
- 2 accordance with locations of the plurality of keys.
- 1 39. The keypad of claim 24, wherein the openings in the flexible carrier occur in
- 2 accordance with locations of the plurality of keys.
- 1 40. The keypad of claim 24, wherein the openings serve to decouple the plurality of
- 2 keys from each other.
- 1 41. The keypad of claim 24, wherein at least one of the plurality of keys is tactiley
- 2 differentiated from others of the keys.
- 1 42. A keypad, comprising:
2 a plurality of keys; and
3 a flexible carrier contacting the plurality of keys, the flexible carrier being divided
4 into at least two pieces, the divisions occurring between the plurality of keys.
- 1 43. The keypad of claim 42, wherein the flexible carrier is divided into at least two
- 2 serpentine-shaped pieces.
- 1 44. The keypad of claim 42, wherein the flexible carrier also has additional openings
- 2 therein to increase the decoupling between the keys.
- 1 45. The keypad of claim 42, wherein at least one of the plurality of keys is tactiley
- 2 differentiated from others of the keys.
- 1 46. A keypad assembly, comprising:
2 a plurality of keys;

3 key support means for supporting the plurality of keys; and
4 key decoupling means located between the plurality of keys.

1 47. The keypad assembly of claim 46, wherein the key decoupling means is a flexible
2 carrier having openings in its interior.

1 48. The keypad assembly of claim 46, wherein the key decoupling means is a
2 flexible carrier having cutouts in its perimeter.

1 49. The keypad of claim 46, wherein at least one of the plurality of keys is tactilely
2 differentiated from others of the keys.